

Enterprise Release Management and the Bimodal IT Environment

What is Bimodal IT?

The IT community is constantly searching for ways to deliver on the increasing demand for faster business innovation at lower costs. Agile development processes seem to have taken over as the dominant means of IT delivery, but the reality is far more complex.

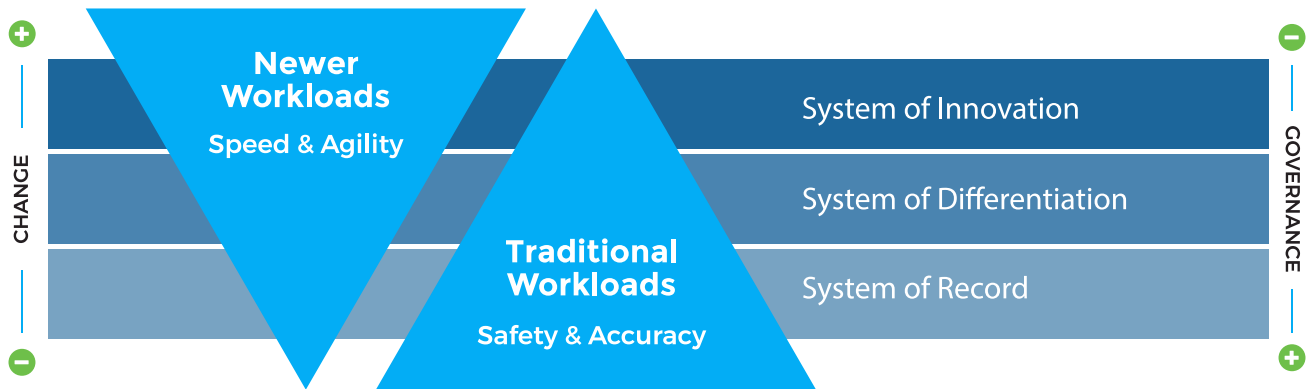
The enterprise IT landscape is stuck between two pools of IT projects – slower business-critical releases and modern, rapid-fire releases. To support the diverse teams, processes, and systems throughout an organization, CIOs can't dismantle the silos that have kept business technology up and running for years. However, as release schedules become more demanding, it's clear that there must be fundamental changes to the way CIOs and their employees approach software releases.

As a means of highlighting the widening gap in the IT community, Gartner introduced a new term for CIOs to consider when thinking about their IT departments. Named Bimodal IT, Gartner offers the following definition:

Bimodal IT is the practice of managing two separate, coherent modes of IT delivery, one focused on stability and the other on agility. Mode 1 is traditional and sequential, emphasizing safety and accuracy. Mode 2 is exploratory and nonlinear, emphasizing agility and speed.

Bimodal IT is a bargain of sorts, jointly pursuing two distinct modes of delivery. One structured for agility and the other for stability. It's a hedge against the different challenges and opportunities that arise in today's dynamic IT environments.

Bimodal IT



Whether CIOs realize it or not, their IT landscape is almost assuredly bimodal. What this means is that there are generally two silos in the organization – Mode 1 which is focused on the legacy applications that support the backbone of an organization and Mode 2 which is focused on more experimental agile releases.

As bimodal IT becomes increasingly difficult to maintain as software releases increase in pace, volume, and complexity, release managers are left with a litany of challenges as they try to execute traditional enterprise release management processes with manual spreadsheets.

To keep up with the constantly evolving IT landscape, release managers will start turning to comprehensive, automated enterprise release management platforms.

Mode 1



- ✔ Slow-moving
- ✔ Risk-averse
- ✔ Evolutionary
- ✔ Classical approach

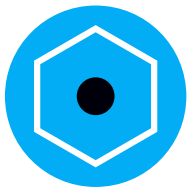
Mode 2



- ✔ Fast-moving
- ✔ Agile
- ✔ Based on experiments
- ✔ Short-lived
- ✔ Market driven

Bimodal IT – The Release Manager’s Perspective

While much of the IT community is just now catching on to the bimodal IT reality, release managers have been steeped in the complexities of a dual-natured IT department. When multiple projects are integrating and transitioning from development to production, release managers sit directly at the intersection of Mode 1 and Mode 2 of bimodal IT and must understand the intricacies of each.

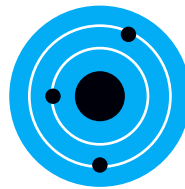


Mode 1 – The Traditional Side of IT

For the legacy systems critical to the organization (for example, an order processing database for a bank), a more meticulous application of processes must support a longer release cadence than modern development teams might be accustomed to amidst the popularity of agile. With a traditional waterfall approach to release, Mode 1 encompasses changes to back-office systems that might only release on a quarterly basis.

Because these business-critical systems are so vital to operations, they often command an “all-hands-on-deck” mentality, especially for QA teams. Stability in production is the chief concern for Mode 1 releases, which is why all QA staff must be on hand to enforce heavy change control.

Quality is a concern in all releases – not just Mode 1 development – but Mode 2 sacrifices heavy control in favor of a more rapid pace.



Mode 2 – The Exploratory Side of IT

Small companies have the benefit of structuring their IT departments around agile development and releases; but large enterprises must implement these agile processes as a more experimental strategy. What this means is that Mode 2 encompasses development of less critical software and applications. For example, Mode 2 might be used to manage mobile development or website redesigns.

Rather than waiting months for release, Mode 2 releases can be made every day (or even multiple times per day depending on the project.) Lightweight governance and quality control is essential to Mode 2 releases, but rapid delivery is the main priority.

Many innovative changes in the IT community have pushed large enterprises to start breaking down their long-standing silos; but bimodal IT functions far more effectively if Mode 1 and Mode 2 remain separate. In an ideal world, Mode 1 and Mode 2 might interact, but only on a limited basis.

Ideal Bimodal IT Management vs. The Common Reality for Release Managers

With proper management, the bimodal IT ideology should make a release manager's job fairly easy. Proper bimodal IT management essentially separates Mode 1 and Mode 2. Take the development of a web application in Mode 2, for example.

With proper management, the Mode 2 team responsible for the web application would work independently of all Mode 1 operations, but may require a Mode 1 system somewhere in the process. However, when the web application development team must interact with a backend system, they should be able to use a well-defined API or protocol rather than spending time to collaborate with Mode 1 teams.

The API would help the web application connect to a seldom-changed Mode 1 system and support a near-complete disconnect between the two sides of bimodal IT. The only issue is that release managers can seldom rely on this sort of smooth management.

When the line between Mode 1 and Mode 2 isn't clearly defined, development projects tend to cross one another and create dependencies between systems. Because of the disparity between Mode 1 systems built with stability in mind and Mode 2 projects developed with rapid releases in mind, Mode 2 projects tend to get blocked in an effort to maintain Mode 1 system uptime.

The strict definition of bimodal IT calls for separate Mode 1 and Mode 2 operations; but real-world development often requires some connection between the two that prevents the ideal management situation. Sophisticated APIs should take care of these interactions - but release managers rarely have the necessary protocols available to them for practical use.

The lack of APIs that can mediate between Mode 1 and Mode 2 leaves release managers with the task of translating between the two sets of teams. This responsibility has resulted in release managers using manual processes to mediate between development teams and try to manage the potential blocking that results from interwoven dependencies.

Supporting efficient enterprise releases comes down to release managers who can expertly navigate the nuances of a bimodal IT - though doing so is easier said than done.

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Best Practices for Release Managers in an Undisciplined Situation

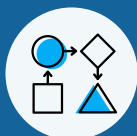
Release managers must be prepared for the worst as Mode 1 and Mode 2 projects frequently mix together throughout the production process. Following these best practices for bimodal IT management can help instill discipline to even the most chaotic departments:



Make Projects Choose a Side:

It's easy to look at a central list of ongoing IT projects and classify them as either Mode 1 or Mode 2 – the differences should be fairly clear. However, release managers should push to classify specific IT functions as they pertain to either Mode 1 or Mode 2.

For example, how does the change management team support traditional projects as opposed to exploratory projects? When systems aren't ready to adapt to both sides of bimodal IT, application teams are left with a chaotic mess of decisions to make.



Keep a Close Eye on Dependencies:

Crossing Mode 1 and Mode 2 isn't a major issue in-and-of itself. The problem is when the comingling is unintentional.

By ensuring all bimodal IT dependencies are intentional and accounted for, release managers can avoid introducing obstacles to release processes on both sides of IT.



Mind the Gap Between Mode 1 and Mode 2:

Release managers are tasked with the job of ensuring production teams cannot follow whichever approach to IT infrastructure they choose. If a project is deemed a Mode 1 project, it should not be able to tap into the continuous deployment pipelines used in Mode 2 projects.

Respect the bimodal IT ideology by understanding that some projects are meant to be agile and some don't fit the agile, DevOps criteria.

Even with these best practices in mind, release managers will quickly become overwhelmed by the challenges of manual enterprise release management. The spreadsheets traditionally used for enterprise release management aren't purpose-built to handle the increasing demands of software releases – both in Mode 1 and Mode 2 of bimodal IT. Automated enterprise release management platforms are the most efficient way to manage both sides of bimodal IT while still preparing for an IT landscape that continues to distance itself from traditional processes.

Enterprise Release Management and the Future of Bimodal IT

Gartner's bimodal IT term properly assesses the current status of IT at many (or most) large enterprises. However, the Mode 1 side of bimodal IT is increasingly giving way to more agile processes. Bimodal IT still has a good decade of life left in it, but as systems continue to accelerate, automated enterprise release management platforms will emerge as essentials for release managers.

For the time being, release managers can still find value in an enterprise release management platform such as Plutora as a means of properly separating Mode 1 and Mode 2 of bimodal IT. Consider the following use cases for release managers focused on succeeding with bimodal IT.

Modeling Processes Across Mode 1 and Mode 2 with Plutora Release Manager

In contrast to the ideal production roadmap, Mode 1 and Mode 2 projects often target the same testing environments and release timelines. To manage these commonalities, release managers must understand the differences in capacity requirements, governance gates, and automation approaches to orchestrate across the bimodal IT boundary.

The Plutora Release Manager module provides a matrix of systems impacted by individual releases. This matrix gives release managers lead time to prepare systems for complex releases and take steps to manage dependencies across traditional and exploratory projects.

Modeling a Wide Range of Environments with Plutora Environment Manager

One of the biggest challenges release managers face with bimodal IT is the need to synchronize environments between slow-moving Mode 1 projects and agile Mode 2 projects. When Mode 1 projects demand weeks of data preparation before the QA process begins in support of a quarterly release, release managers must find a way to manage these demands alongside Mode 2 projects that release every day. Spreadsheet management doesn't provide the visibility necessary to efficiently handle this process.

The Plutora Environment Manager module is able to adapt to different environment needs for Mode 1 and Mode 2 projects. The Environment Manager can monitor both the long-lived, static environments dedicated to QA and staging for Mode 1 projects, as well as the on-demand cloud infrastructures used for Mode 2 projects. Even as projects transition from Mode 1 production to Mode 2, the Environment manager can identify opportunities to make the shift more efficient.

Modeling Real Capacity Requirements Across Mode 1 and Mode 2

With manual enterprise release management, it's challenging (or almost impossible) to assess the impact of one project on other releases. In bimodal IT, it's imperative that release managers can view release timelines across Mode 1 and Mode 2 to understand the impact projects have on already limited testing and engineering resources.

The real capacity limits of a project aren't just computing resources – they cover staff availability for testing, qualification, and execution of a release. The Plutora platform provides visibility into the total spectrum of release resources to help release managers adapt to rapidly changing circumstances as project volume increases.

Managing the Inevitable Collision of Mode 1 and Mode 2

If release managers hope to keep up with the demands of bimodal IT management and continued shift to agile-everything, an automated enterprise release management platform is a necessity. When bimodal IT projects are left unchecked, system availability becomes increasingly unclear and leads to project delays as well as diminished team morale that can hurt future releases.

Gartner's bimodal IT term gives CIOs and release managers a good way to look at their IT projects; but that doesn't mean they are any easier to manage. If you want to learn how the Plutora platform can streamline release management at large enterprises supporting bimodal IT, contact us now for more information.

About Plutora

Plutora, the market leader of value stream management solutions for enterprise IT, improves the speed and quality of software creation by capturing, visualizing and analyzing critical indicators of every aspect of the delivery process. Plutora orchestrates release pipelines across a diverse ecosystem of development methodologies, manages hybrid test environments, correlates data from existing toolchains, and incorporates test metrics gathered at every step. The Plutora Platform ensures organizational alignment of software development with business strategy and provides visibility, analytics and a system of insights into the entire value stream, guiding continuous improvement through the measured outcomes of each effort.

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Learn more: www.plutora.com

Email: contact@plutora.com